

1 WE CLAIM:

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3 1. For use in apparatus for processing wire
4 to cut the wire into sections and to expose section wire
5 ends, the wire having an inner core and sheathing about
6 said core, the apparatus including means for displacing
7 the wire axially endwise, the combination comprising:

8 a) multiple blade structures, including at
9 least two of said structures that move adjacent one
10 another as said two structure move relatively oppositely
11 toward and away from said axis in directions generally
12 normal to said axis,

13 b) each of said two structures having first
14 and second cutting edges,

15 c) said cutting edges configured such that,
16 when the two said structures are moved relatively
17 longitudinally in a primary mode, two of said cutting
18 edges cut through the wire, and when said two structures
19 are moved relatively longitudinally in a second mode, the
20 remaining two of said cutting edges cut into the wire
21 sheathing to enable stripping of the sheathing of the
22 wire.

1 2. The combination of claim 1 wherein at
2 least one of said two structures defines first shoulders
3 elongated longitudinally and forming a space between
4 which the other of said two structures extends during
5 said relative movement.

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8 3. The combination of claim 2 wherein said
9 first shoulders are laterally spaced apart and face one
10 another, and said other of said two structures has second
11 shoulders also elongated longitudinally and extending in
12 proximity with said first shoulders during said relative
13 movement.

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16 4. The combination of claim 1 wherein said
17 apparatus includes actuating means for relatively moving
18 said two structures as defined, and including programming
19 means operatively associated with said apparatus to
20 provide programmable strip depth of said sheathing.

1 5. The combination of claim 3 wherein said
2 other blade structure including a blade and a blade
3 holder carrying said blade, said holder forming said
4 second shoulders.

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7 6. The combination of claim 1 wherein each
8 of said structure extends at opposite sides of said axis.

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11 7. The combination of claim 1 wherein said
12 blade structures include blade plates having said cutting
13 edges, said blade plates extending in close, parallel,
14 overlapping relation during said relative movement.

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17 8. The combination of claim 7 wherein said
18 cutting edges on two of said overlapping plates provide
19 V-shaped edge portions that overlap when the blade plates
20 are moved in said secondary mode during said relative
21 movement.

1 9. The combination of claim 3 wherein said
2 first and second shoulders extend in endwise alignment
3 with one another during said relative movement.
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6 10. The combination of claim 3 wherein said
7 first and second shoulders extend in laterally
8 overlapping relation during said endwise movement.
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11 11. The combination of claim 1 including
12 support means for said blade structures for holding the
13 blade structures in fixed positions on the support means,
14 each blade structure comprising two discrete blade
15 plates, one plate carrying one V-shaped cutting edge and
16 the other plate carrying another V-shaped cutting edge.
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19 12. The combination of claim 11 including
20 loading means for loading at least one blade structure
21 into said support means.
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1 13. The combination of claim 10 including
2 retainers carried by the support means for holding the
3 blade structures attached in fixed positions on the
4 support means, and to allow release of the blade
5 structures from the support means, enabling their
6 selective replacement.

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9 14. In wire processing apparatus wherein wire
10 is moved endwise along a travel path, the combination
11 comprising:

12 a) blade pair means including two blade
13 structures each extending at opposite sides of the wire
14 travel path,

15 b) at least one drive means,

16 c) and other means operatively connected
17 between said drive means and said blade structures, and
18 responsive to operation of the drive means to cause one
19 blade structure to be relatively displaced in direction
20 A toward said path as the other blade structure is
21 relatively displaced in direction -A, to process the
22 wire, and subsequently to cause said one blade structure
23 to be relatively displaced in direction -A, as said other
24 blade structure is relatively displaced in direction A,

1 to process the wire.

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4 15. The combination of claim 14 wherein each
5 said blade structure includes two blades.

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8 16. The combination of claim 15 wherein said
9 two blades respectively face in direction A and -A.

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12 17. The combination of claim 14 wherein each
13 of said two blades has a generally V-shaped cutting edge.

1 18. In the method of processing wire wherein
2 the wire is moved endwise along a travel path, the steps
3 that include

4 a) providing blade pair means including two
5 blade structures each extending at opposite sides of the
6 wire travel path,

7 b) providing at least one drive means, and
8 other means operatively connected between the drive means
9 and the blade structure,

10 c) and operating said drive means to cause
11 one blade structure to be relatively displaced in
12 direction A toward said path as the other blade structure
13 is relatively displaced in direction -A, to process the
14 wire, and subsequently to cause said one blade structure
15 to be relatively displaced in direction -A, as said other
16 blade structure is relatively displaced in direction A,
17 to process the wire.

1 19. The combination of claim 1 wherein the
2 first and second cutting edges of one structure have
3 different configurations, and the first and second
4 cutting edges of the other structure have different
5 configurations, the first cutting edge of the first
6 structure having substantially the same configuration as
7 the second cutting edge of the second structure, and the
8 second cutting edge of the first structure having
9 substantially the same configuration as the first cutting
10 edge of the first structure.

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13 20. The combination of claim 19 wherein the
14 first cutting edge of the first structure has C-shaped C_1
15 and the second cutting edge of the first structure has C-
16 shape C_2 , and where C_1 is larger in size than C_2 .